ABSTRACT

An injection molding apparatus (10, 110) for molding an annular thermoplastic element, such as an annular closure element (E) with no more than a single weldline in the annular extent of the thermoplastic element. The thermoplastic element is molded in an annular mold cavity (12, 112), and moldable thermoplastic material (M) is introduced into the mold cavity from a coaxially-aligned annular flow path (18, 118) that is defined between a sliding sleeve (24, 124) and an annular member (22, 122). The sliding sleeve surrounds and is slideable with respect to a fixed pin (26, 126) and is slideable between a first, or forward, position, where no thermoplastic material can flow into the mold cavity, and a second, or rearward, position, where thermoplastic material can flow into the mold cavity. Thermoplastic material is introduced into the annular flow path, at a location upstream of the second position of the sliding sleeve, in a single stream through a passage (28, 128) to limit the weldlines in the molded thermoplastic element to no more than one.